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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/446,839	03/24/2000	Ernst Michael Winter	45/276 LI/SCH	2969

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EXAMINER

HO. THOMAS Y

ART UNIT PAPER NUMBER

3677

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



## Office Action Summary

Application No.

09/446,839

Applicant(s)

WINTER ET AL.

Examiner

Thomas Y Ho

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Status of the Claims*

Claims 14-25 are pending. Claims 1-13 have been withdrawn or cancelled.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 14-17 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reber US4604329 (referred to as Reber329) in view of Nassau US5882786.**

As to claim 14, Reber329 discloses, an ornamental semiconductor substrate, comprising: a body 10, said body comprising a natural or synthetic semiconductor substrate (col.2, ln.50-52) being suitable only for technical or industrial purposes, wherein said semiconductor substrate has at least one visible surface adapted to serve as a support for a structured material layer 14, and wherein at least one theme or image is formed from the structure of the material layer. The difference between the claim and Reber329 is the claim recites, a gemstone. Reber329 discloses that the substrate is a semiconductor substrate (using silicon as an example; col.2, ln.50-52). Nassau discloses a semiconductor substrate, in this case silicon carbide, similar to that of Reber329 (col.2, ln.25-40). In addition, Nassau further teaches that silicon carbide is a semiconductor as well as a gemstone (col.6, ln.29-36), and also that silicon carbide is used in abrasive products or in semiconductor devices (col.2, ln.25-40). It would have been obvious to one of ordinary skill in the art, having the disclosures of Reber329 and Nassau before him at the

Art Unit: 3677

time the invention was made, to use as the semiconductor substrate of Reber329 the semiconductor/gemstone of Nassau, to obtain a silicon carbide substrate. One would have been motivated to make such a combination because Reber329 discloses the desirability of using a semiconductor substrate, and silicon carbide can be fashioned to virtually any shape and has favorable physical properties, as taught by Nassau (col.3, ln.40-55).

As to claim 15, Reber329 discloses, wherein the visible surface is smooth.

As to claim 16, Reber329 discloses, wherein the material layer is shiny (gold and other metals are shiny).

As to claim 17, Reber329 discloses, wherein the material layer comprises a precious metal (in this case gold) or titanium nitride.

As to claim 20, Reber329 discloses, the body in the form of a substrate layer with said visible face as a support for the material layer. Nassau teaches the use of a silicon carbide semiconductor/gemstone substrate that also has a diamond layer deposited thereon via a CVD process.

As to claim 21, Reber329 discloses, the body in the form of a substrate with said visible face as a support for the material layer. Nassau teaches the use of a silicon carbide gemstone substrate, that also has a polycrystalline diamond aggregate deposited thereon (col.11, ln.5-11).

As to claim 22, Reber329 discloses, which has as the visible surface one or more surfaces that are level, concave, convex, or a mixture thereof.

As to claim 23, Reber329 discloses, wherein a transparent protective layer 28 is disposed on the material layer (col.5, ln.60-63).

**Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reber US4604329 (referred to as Reber329) in view of Nassau US5882786, and further in view of Lach US5423714.**

As to claim 18, the difference between the claim and Reber329 is the claim recites, wherein a metallic layer, as a retention intermediary is disposed between the visible surface and the material layer. Lach discloses a coated substrate for jewelry similar to that of Reber329. In addition, Lach further teaches the use of a metallic layer as a retention intermediary between a visible surface and material layer (col.2, ln.30-37). It would have been obvious to one of ordinary skill in the art, having the disclosures of Reber329 and Lach before him at the time the invention was made, to modify the layers of Reber329 to include a metallic layers, as in Lach, to obtain a retention intermediary disposed between surfaces. One would have been motivated to make such a combination because the ability to provide an adhesive layer would have been achieved, as taught by Lach (col.2, ln.30-37).

As to claim 19, Lach teaches, wherein the retention intermediary is a titanium or chromium layer (in this case, chromium-nickel).

**Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reber US4604329 (referred to as Reber329) in view of Nassau US5882786, and further in view of Konig US5587233.**

As to claim 24, Reber329 discloses, wherein the protective layer 28 is made of a transparent oxide. The difference between the claim and Reber329 is the claim recites the layer is a CVD layer and is made of corundum or diamond. It should first be noted that corundum is aluminum oxide, and is a transparent oxide, as disclosed in Reber329. Konig discloses a coated

Art Unit: 3677

substrate similar to that of Reber329. In addition, Konig further teaches that a protective layer of corundum (aluminum oxide) is deposited by CVD. It would have been obvious to one of ordinary skill in the art, having the disclosures of Reber329 and Konig before him at the time the invention was made, to modify the transparent oxide protective layer of Reber329 to be made of corundum using CVD, as in Konig, to obtain a corundum layer made by CVD. One would have been motivated to make such a combination because this type of layer would protect, have good wear properties, as taught by Konig (col.2, ln.35-46; col.3, ln.1-5).

**Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reber US4604329 (referred to as Reber329) in view of Nassau US5882786, and further in view of Reber US4725511 (referred to as Reber511).**

As to claim 25, the difference between the claim and Reber329 is the claim recites, which has a body adapted to form a face of a clock. Reber329 already discloses the body is used on various jewelry items (col.7, ln.25-45), but not a face of a clock specifically. Reber511 discloses a coated substrate for jewelry, similar to that of Reber329. In addition, Reber511 further teaches the use of the body as a watch face (col.7, ln.45-50). It would have been obvious to one of ordinary skill in the art, having the disclosures of Reber329 and Reber511 before him at the time the invention was made, to use the body of Reber329 in a watch face, as in Reber 511, to obtain a watch face made of a layered substrate. One would have been motivated to make such a combination because it is merely intended use, and it has been held that a recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim. In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA

Art Unit: 3677

1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987).

### ***Response to Arguments***

Applicant's arguments filed 8/16/04 have been fully considered but they are not persuasive.

The Applicant argues (p. 3) none of the cited references disclose or suggest a visible surface on which a structured material layer can be applied. The Examiner respectfully disagrees. Reber discloses a body 10 having a visible surface (upper surface of 10 in Fig. 1d) on which a structured material layer 14 can be applied.

The Applicant argues (p. 3) that Reber and Nassau fail to disclose or suggest any motivation or incentive for the combination, and so the rejection is improper. The Examiner respectfully disagrees. Nassau is provided to show that silicon carbide is a gemstone. Nassau is not used to modify Reber in claim 14. The silicon carbide is already in Reber, and Nassau is just provided to define the material, not to make any kind of structural modification.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 3677

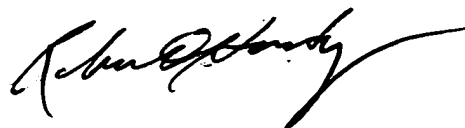
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y Ho whose telephone number is (703)305-4556. The examiner can normally be reached on M-F 10:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J Swann can be reached on (703)306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TYH



**ROBERT J. SANDY  
PRIMARY EXAMINER**